

DuPont Packaging & Industrial Polymers

Elvax® resins

DuPont™ Elvax® 265

Description

Generic Name	Ethylene Vinyl Acetate
Product Description	DuPont™ Elvax® 265 is an ethylene-vinyl acetate copolymer resin for use in industrial applications.

Product Characteristics

Processing Method	* Extrusion
Typical Applications	Elvax® 265 resins can be used for the following applications: molding, compounding and extrusion; wire and cable; and adhesives, sealants, and wax blends. For additional information and properties associated with specific application, please refer to the Grade Selector Guides found on the Elvax® website for industrial applications, http://www.dupont.com/industrial-polymers/elvax/index.html .
Material Status	* Commercial: Active
Availability	* Globally
Composition	* 28 %, By Weight, Vinyl Acetate * BHT antioxidant
Uses	* Industrial Applications
Manufacturer / Supplier	* DuPont Packaging & Industrial Polymers

Properties

Physical

Density	0.955g/cm³	ASTM D1505
Density	0.951g/cm³	ASTM D792 – ISO 1183
Melt Index (190°C/2.16kg)	3g/10 min	ASTM D1238 – ISO 1133

Thermal

Thermal	Nominal Values	Test Method
Melting Point	73°C (163°F)	ASTM D3418 – ISO 3146
Vicat Softening Point	49°C (120°F)	ASTM D1525 – ISO 306
Cloud Point in Paraffin Wax	66°C (151°F)	Note: 10% Elvax® in fully refined paraffin wax, 146 AMP. Incompatible at temperatures up to 177°C (350°F).
Softening Point Ring and Ball	171°C (340°F)	ASTM E28
Brittleness Temperature	–100°C (–148°F)	ASTM D746

high density

Hardness	Nominal Values	Test Method
Durometer Hardness (Shore A)	86	ASTM D2240 – ISO 868

Processing Information

General Processing Information

Elvax® resins can be processed by conventional thermoplastic processing techniques, including injection molding, structural foam molding, sheet and shape extrusion, blow molding and wire coating. They can also be processed using conventional rubber processing techniques such as Banbury, two-roll milling and compression molding.

Elvax can be used in conventional extrusion equipment designed to process polyethylene resins. However, corrosion-protected barrels, screws, adapters, and dies are recommended, since, at sustained melt temperatures above 446°F (230°C), ethylene vinyl acetate (EVA) resins may thermally degrade and release corrosive by-products.

FDA Status

Elvax® 265 EVA Resin complies with Food and Drug Administration Regulation 21 CFR 177.1350(a)(1) – Ethylene-vinyl acetate copolymers, subject to the limitations and requirements therein. This Regulation describes polymers that may be used in contact with food, subject to the finished food-contact article meeting the extractive limitations under the intended conditions of use, as shown in paragraph (b)(1) of the Regulation.

Safety & Handling

A Product Safety Bulletin, Material Safety Data Sheet, and more detailed information on compounding and processing Elvax® resins for specific applications are available from your DuPont Packaging and Industrial Polymers representative.

Read and understand the Material Safety Data Sheet (MSDS) before using this product

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This data sheet is effective as of 4/5/2005, and supersedes all previous versions.



The miracles of science®

ExxonMobil LLDPE

LL 1004YB

Wire & Cable Resin

Description

LL 1004YB is a C₄ Ziegler Natta LLDPE, especially designed for Low Voltage power cable insulation, using the two-step silane cross-linking process.

The grade contains a higher level of antioxidants and has excellent Environmental Stress Crack Resistance (ESCR).

Sufficient Cu-inhibitor should be added to meet specific ageing requirements for insulation.

For jacketing applications, addition of Carbon Black or UV stabilizer is required.

Applications

- Two-step Silane cross-linkable insulation for Low Voltage power installation cable
- Two-step silane cross-linkable insulation for Arial Bundle Cable
- Telecom or Low Voltage power cable jacketing

Additive Package	Antiblock	Slip	Thermal Stabilizer
LL 1004YB	No	No	Yes

Resin Properties	Test Based On	Typical Value / Unit
Melt Index	ASTM D 1238	2.8 g/10 min
Density	ExxonMobil Method	0.918 g/cm ³
Peak Melting Temperature	ExxonMobil Method	121 °C 250 °F

low density

Molded Properties¹

Flexural Modulus, 1% Secant	ASTM D 790	251 MPa	36000 psi
Tensile Strength at Yield	ASTM D 638	12 MPa	1740 psi
Tensile Strength at Break	ASTM D 638	13 MPa	1890 psi
Elongation at Yield	ASTM D 638	16 %	
Elongation at Break	ASTM D 638	710 %	
Shore Hardness – D (15s)	ASTM D 2240	48	
Volume Resistivity	ASTM D 257	6 * 10 ¹⁵ Ohm.cm	
Dielectric Constant (60 Hz)	ASTM D 150	2.17	
Dissipation Factor (60 Hz)	ASTM D 150	5.0 * 10 ⁻⁴	
Dielectric Strength (500V/sec)	ASTM D 149	53 V/μ	1340 V/mil

1. Specimens were compression molded in accordance with ASTM D 4703.

Revised January 2006

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